FIG.1

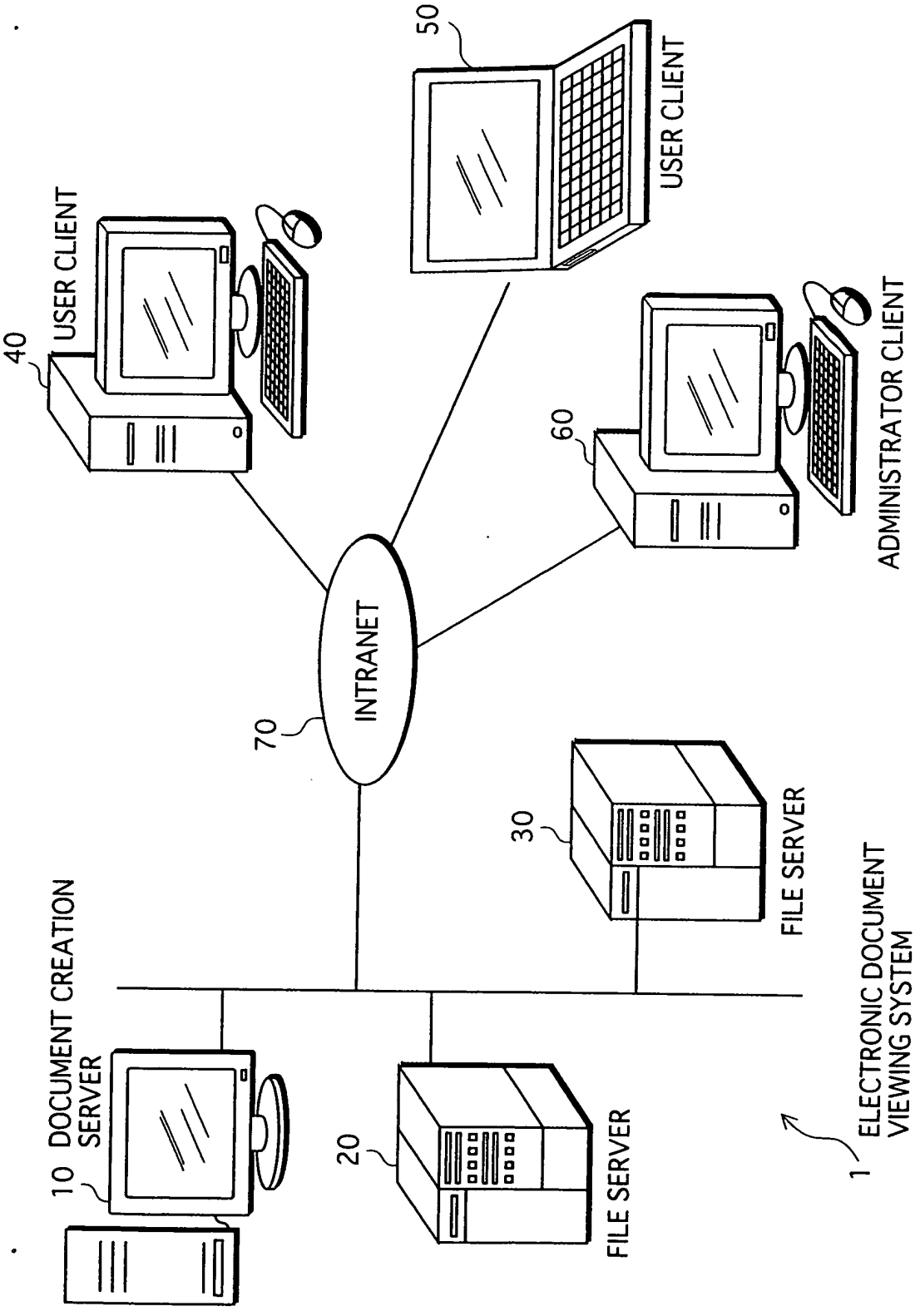

1 ELECTRONIC DOCUMENT VIEWING SYSTEM
10 DOCUMENT CREATION SERVER
20 FILE SERVER
30 FILE SERVER
40 USER CLIENT
50 USER CLIENT
60 ADMINISTRATOR CLIENT
70 INTRANET

FIG.2

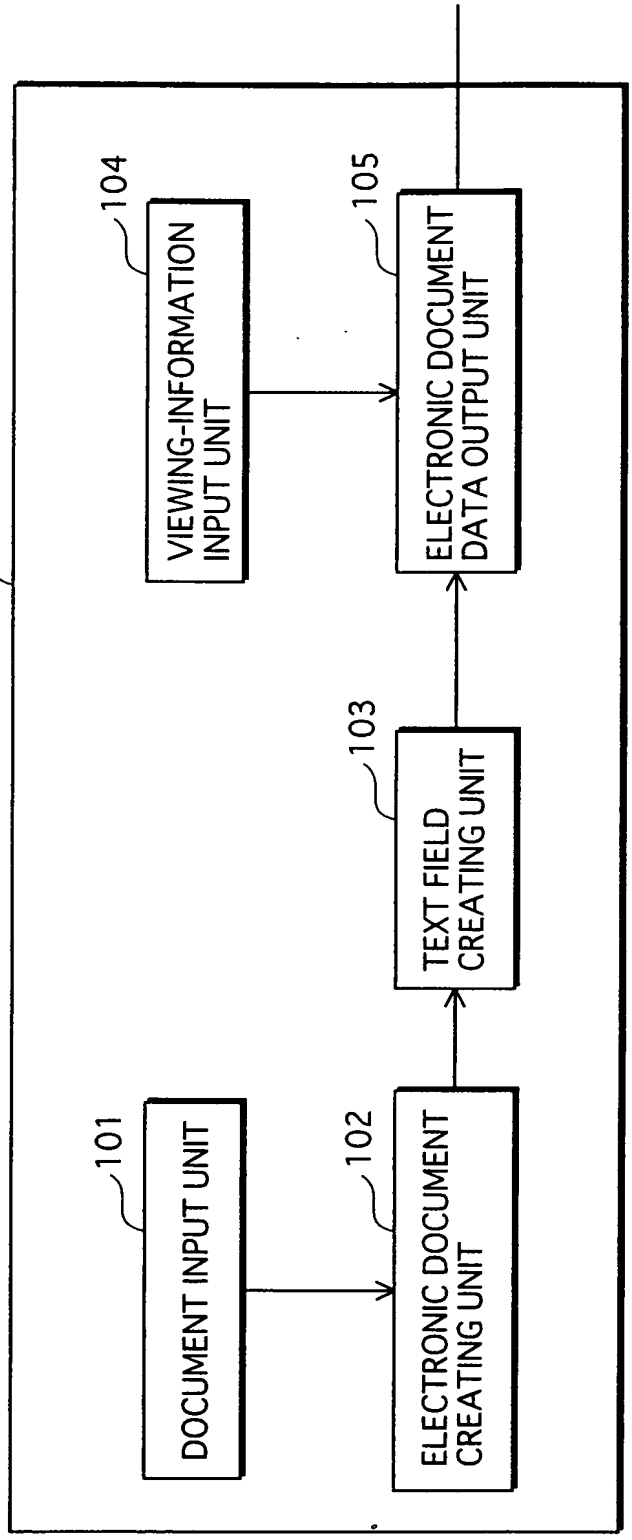

10 DOCUMENT CREATION SERVER
101
DOCUMENT INPUT UNIT
102
ELECTRONIC DOCUMENT CREATING UNIT
103
TEXT FIELD CREATING UNIT
104
VIEWING-INFORMATION INPUT UNIT
105
ELECTRONIC DOCUMENT DATA OUTPUT UNIT

FIG.3A

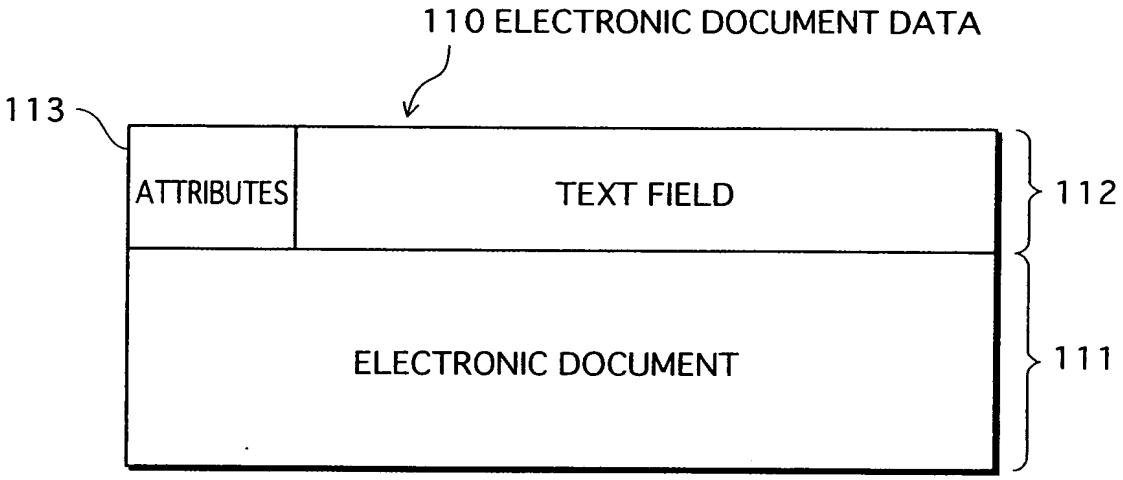

110 ELECTRONIC DOCUMENT DATA
113
ATTRIBUTES
TEXT FIELD
112
ELECTRONIC DOCUMENT
111

FIG.3B

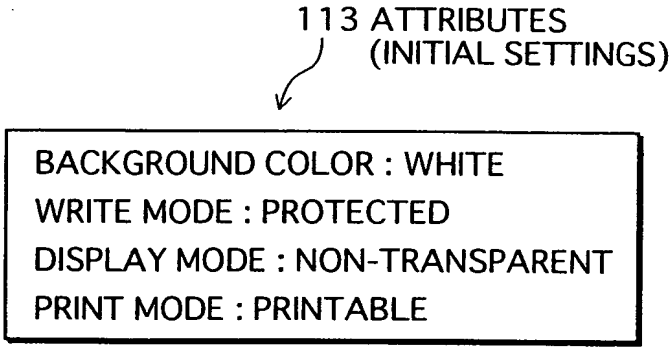

113 ATTRIBUTES
(INITIAL SETTINGS)
BACKGROUND COLOR : WHITE
WRITE MODE : PROTECTED
DISPLAY MODE : NON-TRANSPARENT
PRINT MODE : PRINTABLE

FIG.4

120 VIEWING INFORMATION

CLIENT NAME	DEVICE ID	PERMITTED OFFLINE VIEWING TIME
ADMINISTRATOR CLIENT 60	ID_C	UNLIMITED
USER CLIENT 40	ID_A	2 HOURS
USER CLIENT 50	ID_B	0 HOURS

FIG.5

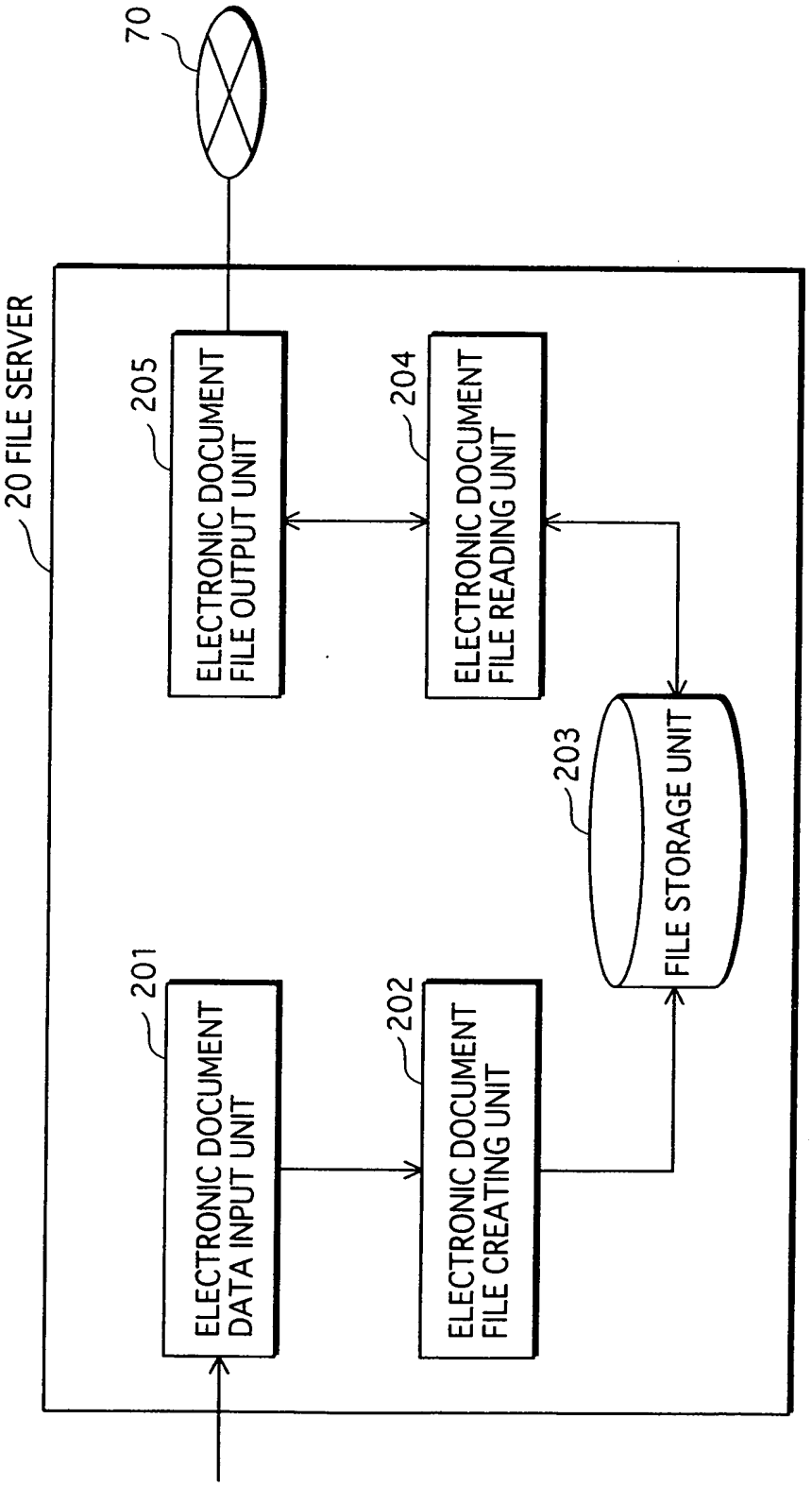

70
20 FILE SERVER
205
ELECTRONIC DOCUMENT FILE OUTPUT UNIT
204
ELECTRONIC DOCUMENT FILE READING UNIT
203
FILE STORAGE UNIT
201
ELECTRONIC DOCUMENT DATA INPUT UNIT
202
ELECTRONIC DOCUMENT FILE CREATING UNIT

FIG.6

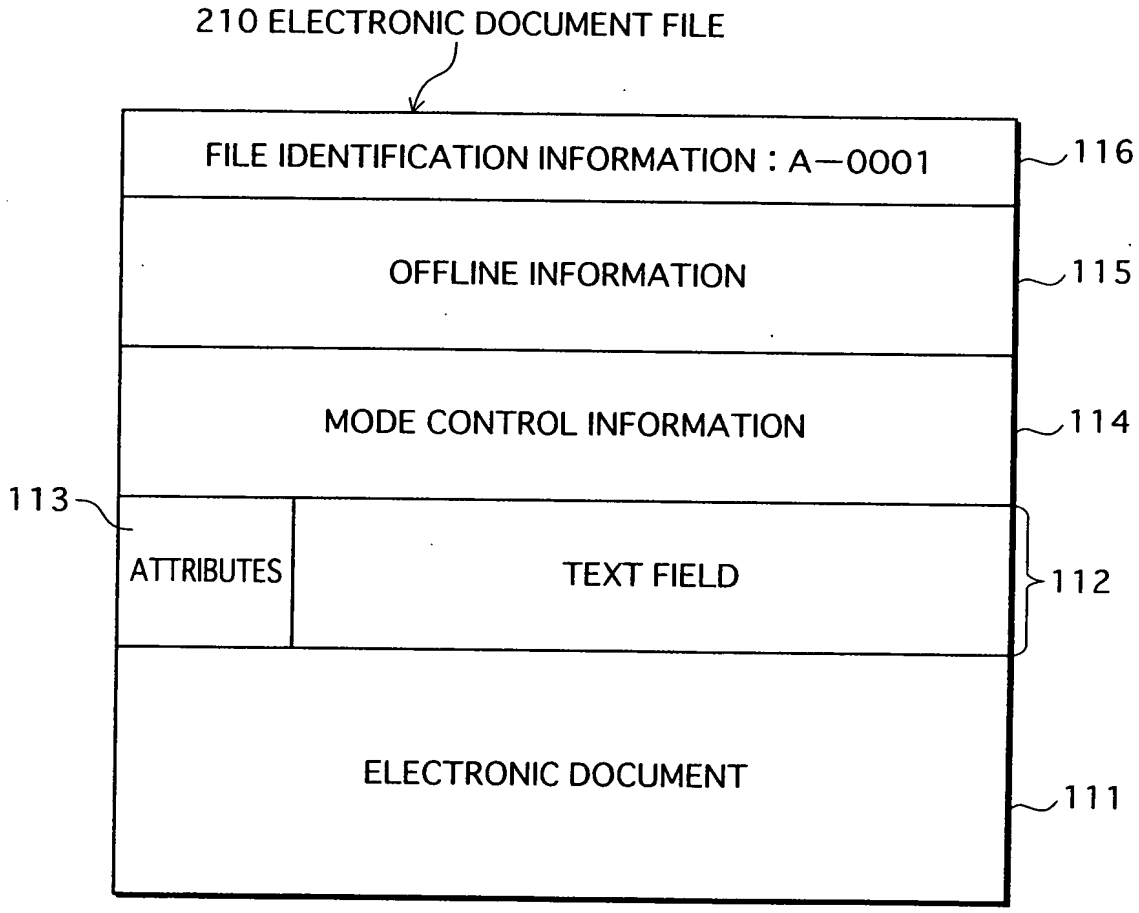

210 ELECTRONIC DOCUMENT FILE
FILE IDENTIFICATION INFORMATION : A—0001
116
OFFLINE INFORMATION
115
MODE CONTROL INFORMATION
114
113
ATTRIBUTES
TEXT FIELD
112
ELECTRONIC DOCUMENT
111

FIG.7A

MODE CONTROL INFORMATION 114

```
//display if this path starts with "http://"
if(this.path.indexOf("http://",0)==0{
  //online viewing
  if(this.pageNum==0){
    this. delay=true;
    this.pageNum=0;
    var fx = this.getField("noSave");
        var disp=fx.display;
        var visi=display.visible;
        if(dis==visi){
            for(var p=0;p<this.numPages;p++){
        this.pageNum=p;
        fx=this.getField("noSave");
        fx.display=display.hidden;
      }
      }
    this.pageNum=0;
    this.delay=false;
    this.dirty=false;
  }
} else {
  //offline viewing
   if(this.pageNum==0){
  this. delay=true;
  this.pageNum=0;
  var fx = this.getField("noSave");
  if(fx.display!=display.visible) {
      for(var p=0;p<this.numPages;p++){
       this.pageNum=p;
       fx=this.getField("noSave");
       fx.display=display.visible;
     }
     }
  this.pageNum=0;
  this.delay=false;
  this.dirty=false;
}
```

FIG.7B

OFFLINE INFORMATION 115

ID__C	UNLIMITED
ID__A	2 HOURS
ID__B	0 HOURS

FIG.8

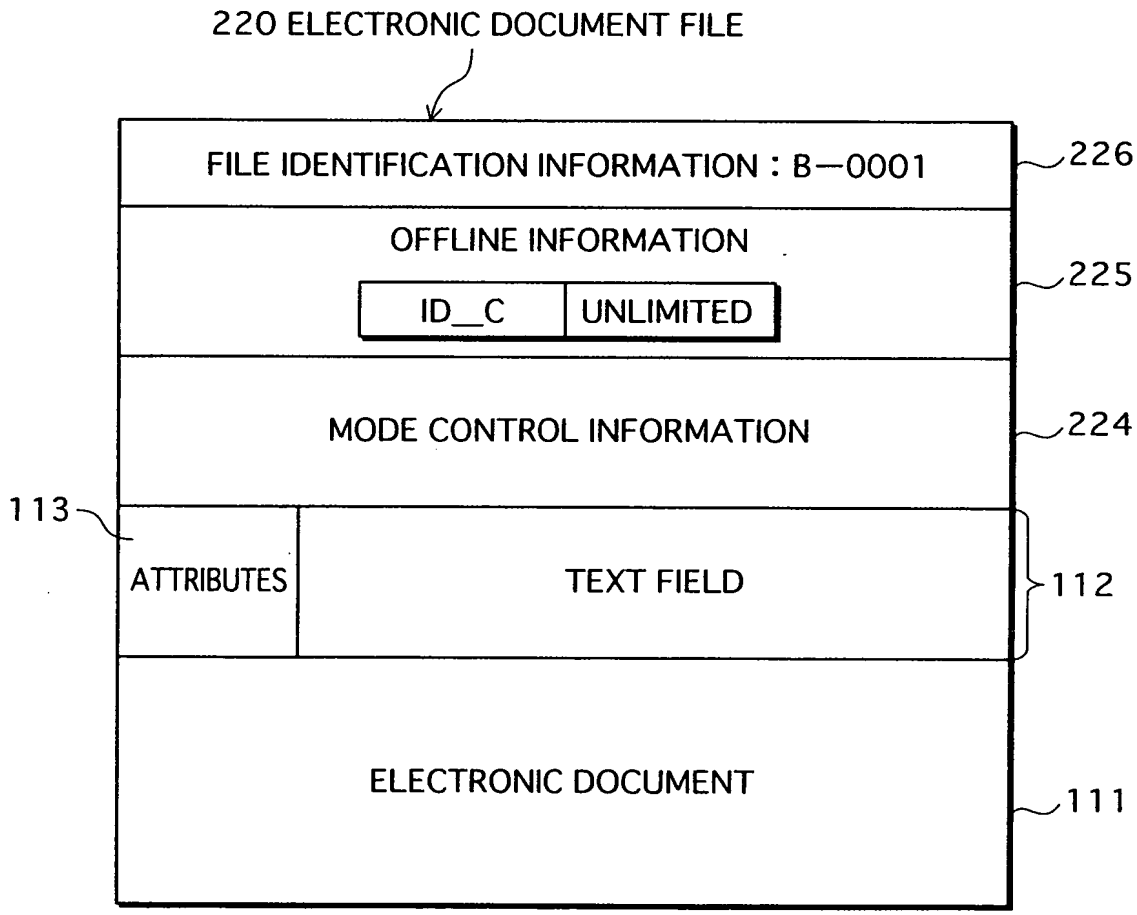

220 ELECTRONIC DOCUMENT FILE
FILE IDENTIFICATION INFORMATION : B—0001
226
OFFLINE INFORMATION
ID_C
UNLIMITED
225
MODE CONTROL INFORMATION
224
113
ATTRIBUTES
TEXT FIELD
112
ELECTRONIC DOCUMENT
111

FIG.9

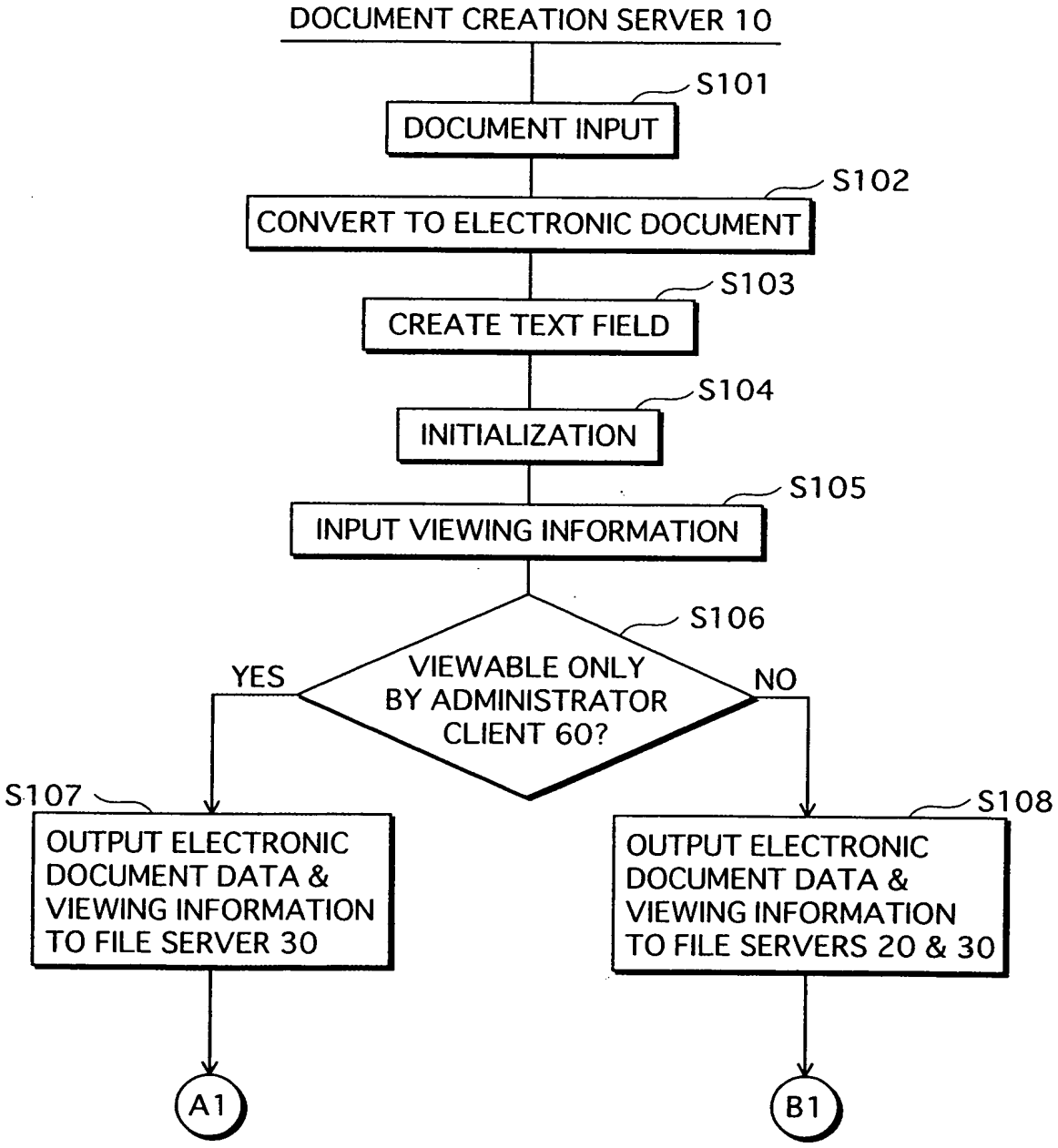

DOCUMENT CREATION SERVER 10
S101
DOCUMENT INPUT
S102
CONVERT TO ELECTRONIC DOCUMENT
S103
CREATE TEXT FIELD
S104
INITIALIZATION
S105
INPUT VIEWING INFORMATION
S106
VIEWABLE ONLY BY ADMINISTRATOR CLIENT 60?
YES
NO
S107
OUTPUT ELECTRONIC DOCUMENT DATA & VIEWING INFORMATION TO FILE SERVER 30
S108
OUTPUT ELECTRONIC DOCUMENT DATA & VIEWING INFORMATION TO FILE SERVERS 20 & 30
A1
B1

FIG.10

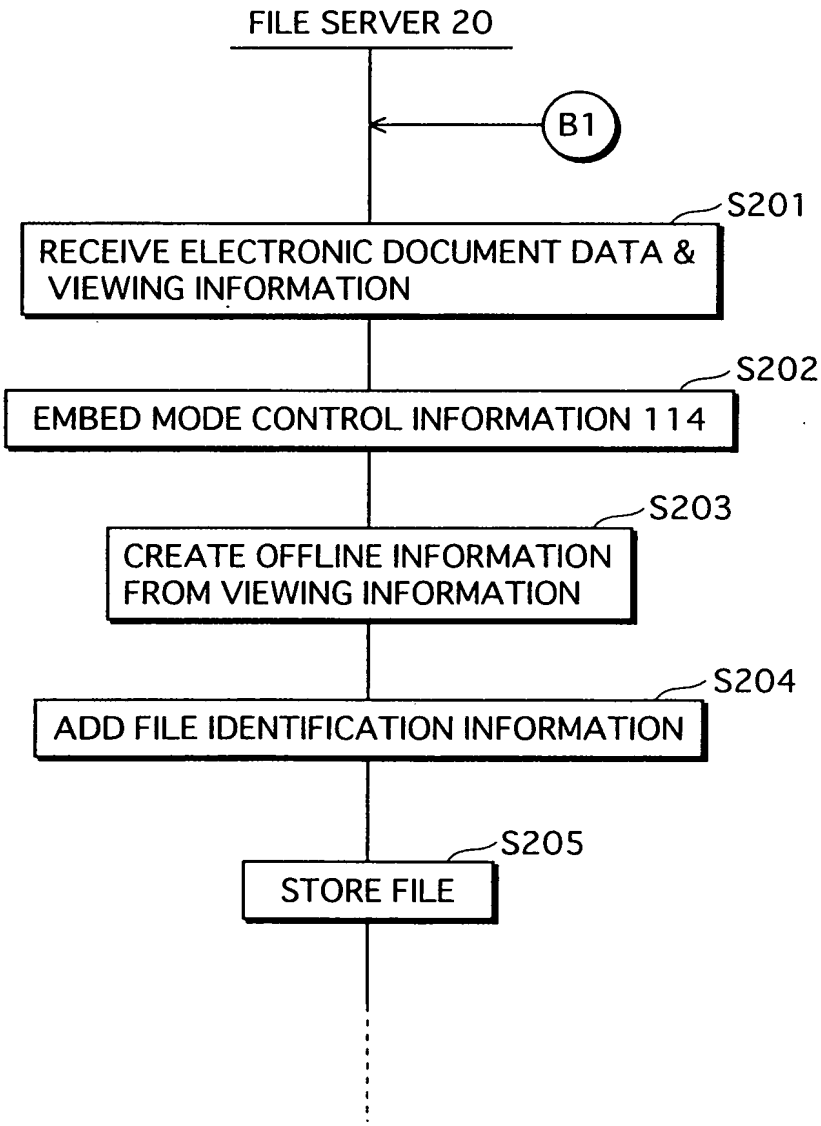

FILE SERVER 20
B1
S201
RECEIVE ELECTRONIC DOCUMENT DATA & VIEWING INFORMATION
S202
EMBED MODE CONTROL INFORMATION 114
S203
CREATE OFFLINE INFORMATION FROM VIEWING INFORMATION
S204
ADD FILE IDENTIFICATION INFORMATION
S205
STORE FILE

FIG.11

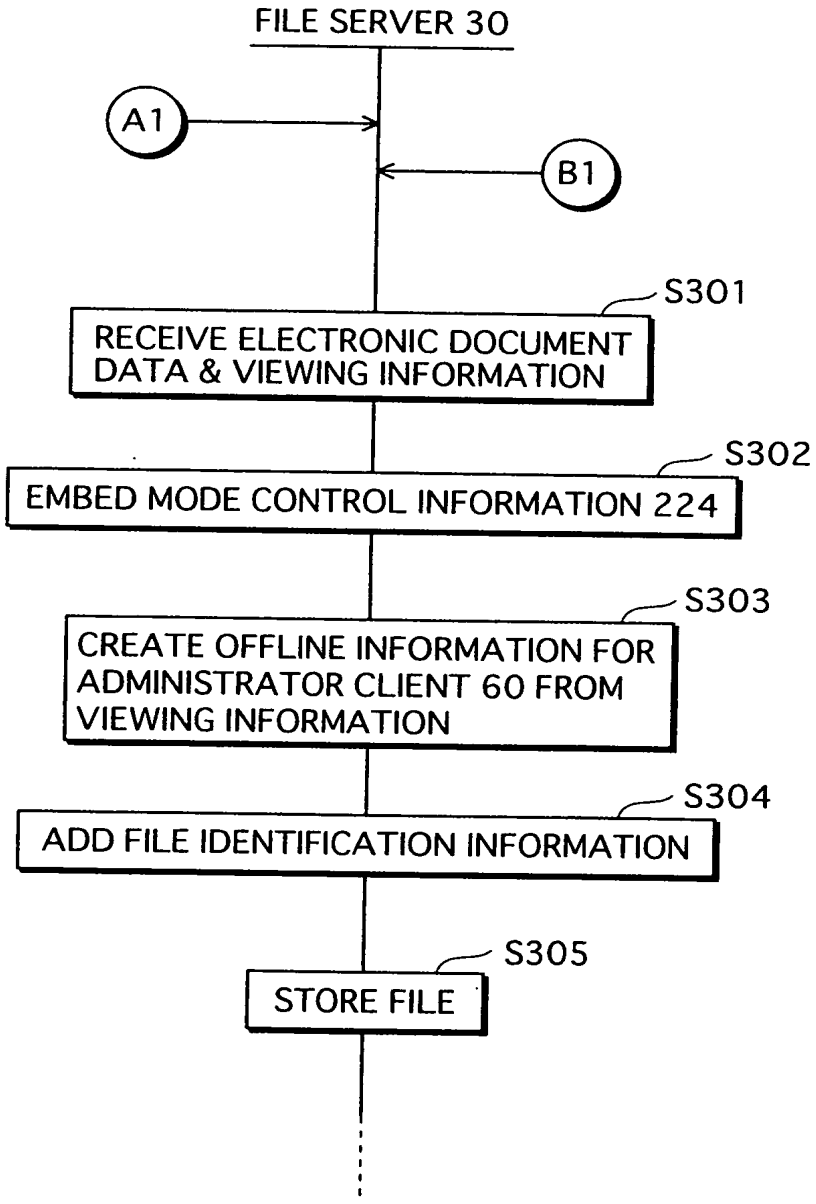

FILE SERVER 30
A1
B1
S301
RECEIVE ELECTRONIC DOCUMENT DATA & VIEWING INFORMATION
S302
EMBED MODE CONTROL INFORMATION 224
S303
CREATE OFFLINE INFORMATION FOR ADMINISTRATOR CLIENT 60 FROM VIEWING INFORMATION
S304
ADD FILE IDENTIFICATION INFORMATION
S305
STORE FILE

FIG.12

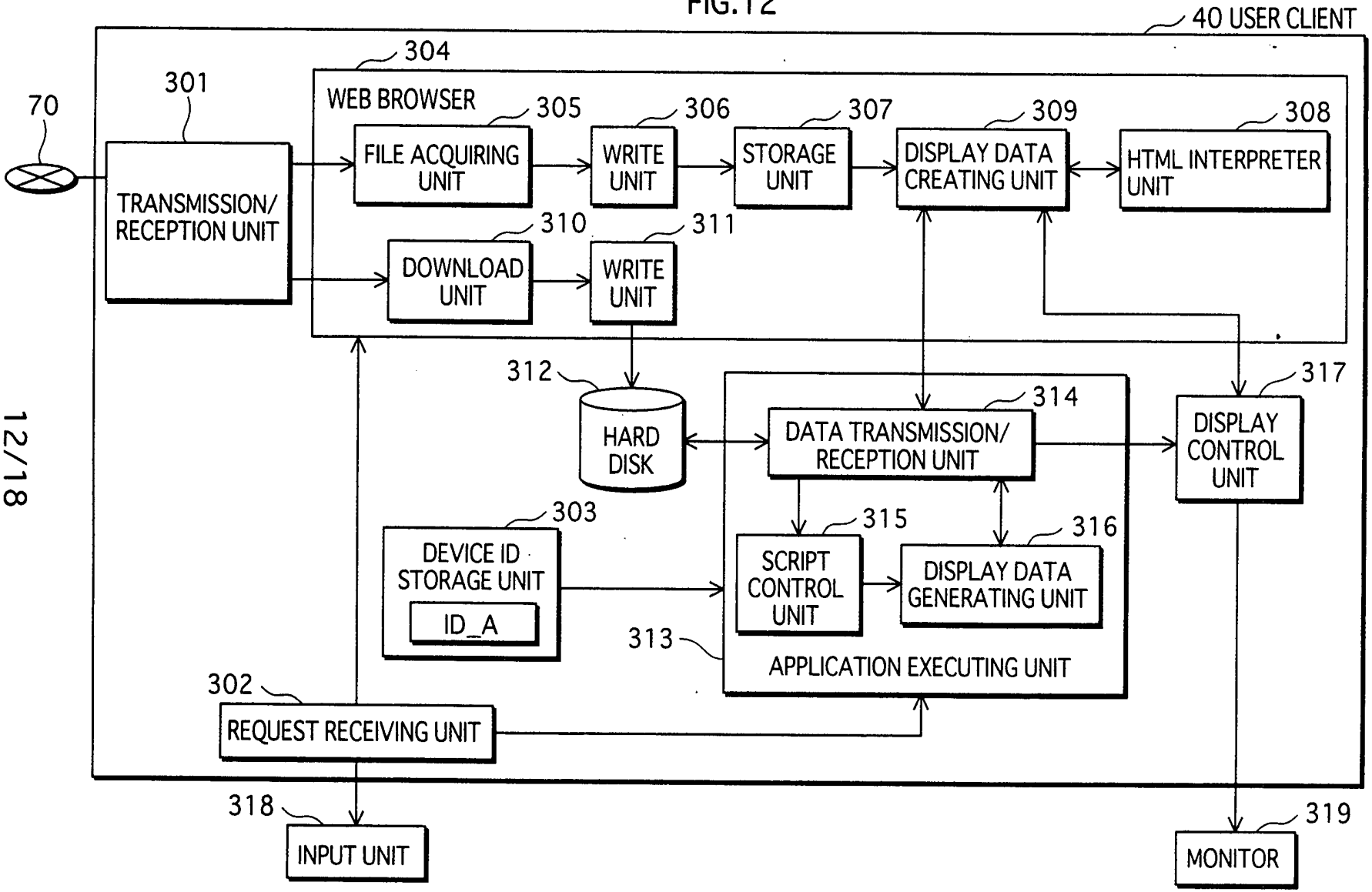

40 USER CLIENT
304
WEB BROWSER
301
70
TRANSMISSION/ RECEPTION UNIT
305
FILE ACQUIRING UNIT
306
WRITE UNIT
307
STORAGE UNIT
309
DISPLAY DATA CREATING UNIT
308
HTML INTERPRETER UNIT
310
DOWNLOAD UNIT
311
WRITE UNIT
312
HARD DISK
314
DATA TRANSMISSION/ RECEPTION UNIT
317
DISPLAY CONTROL UNIT
303
DEVICE ID STORAGE UNIT
ID_A
315
SCRIPT CONTROL UNIT
316
DISPLAY DATA GENERATING UNIT
313
APPLICATION EXECUTING UNIT
302
REQUEST RECEIVING UNIT
318
INPUT UNIT
319
MONITOR

FIG.13

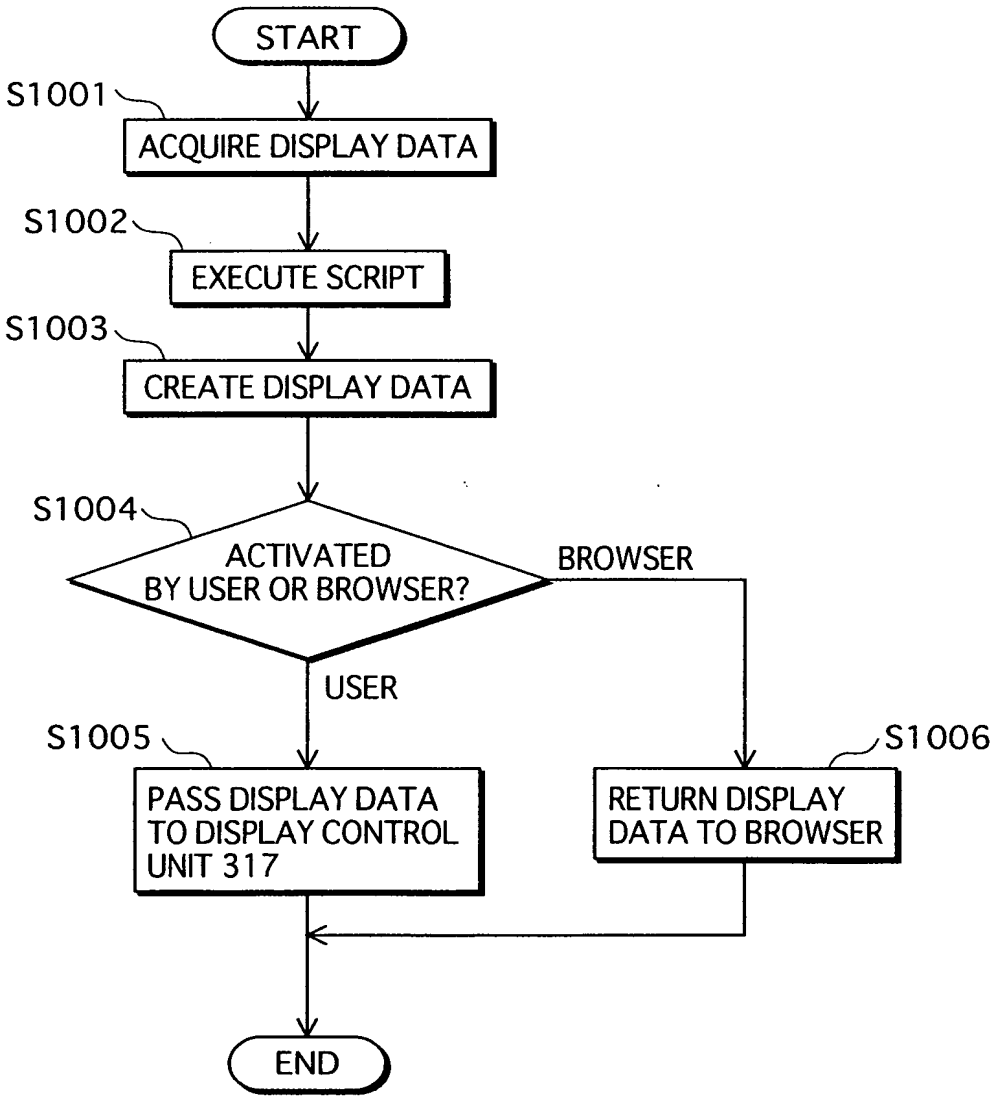

START
S1001
ACQUIRE DISPLAY DATA
S1002
EXECUTE SCRIPT
S1003
CREATE DISPLAY DATA
S1004
ACTIVATED BY USER OR BROWSER?
BROWSER
USER
S1005
PASS DISPLAY DATA TO DISPLAY CONTROL UNIT 317
S1006
RETURN DISPLAY DATA TO BROWSER
END

FIG.14

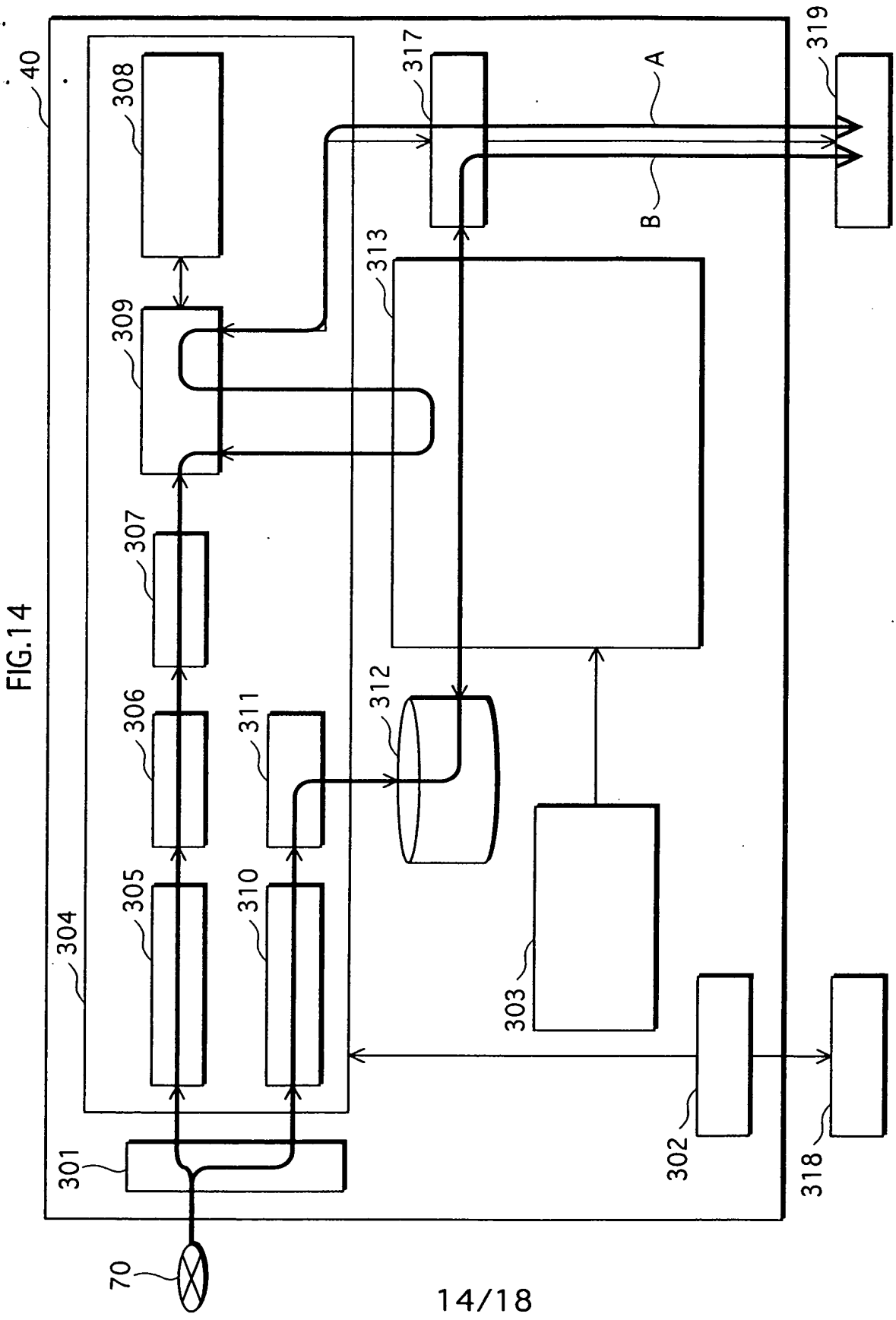

40
308
317
A
319
B
309
313
307
306
311
312
305
310
304
303
301
302
318
70

FIG.15

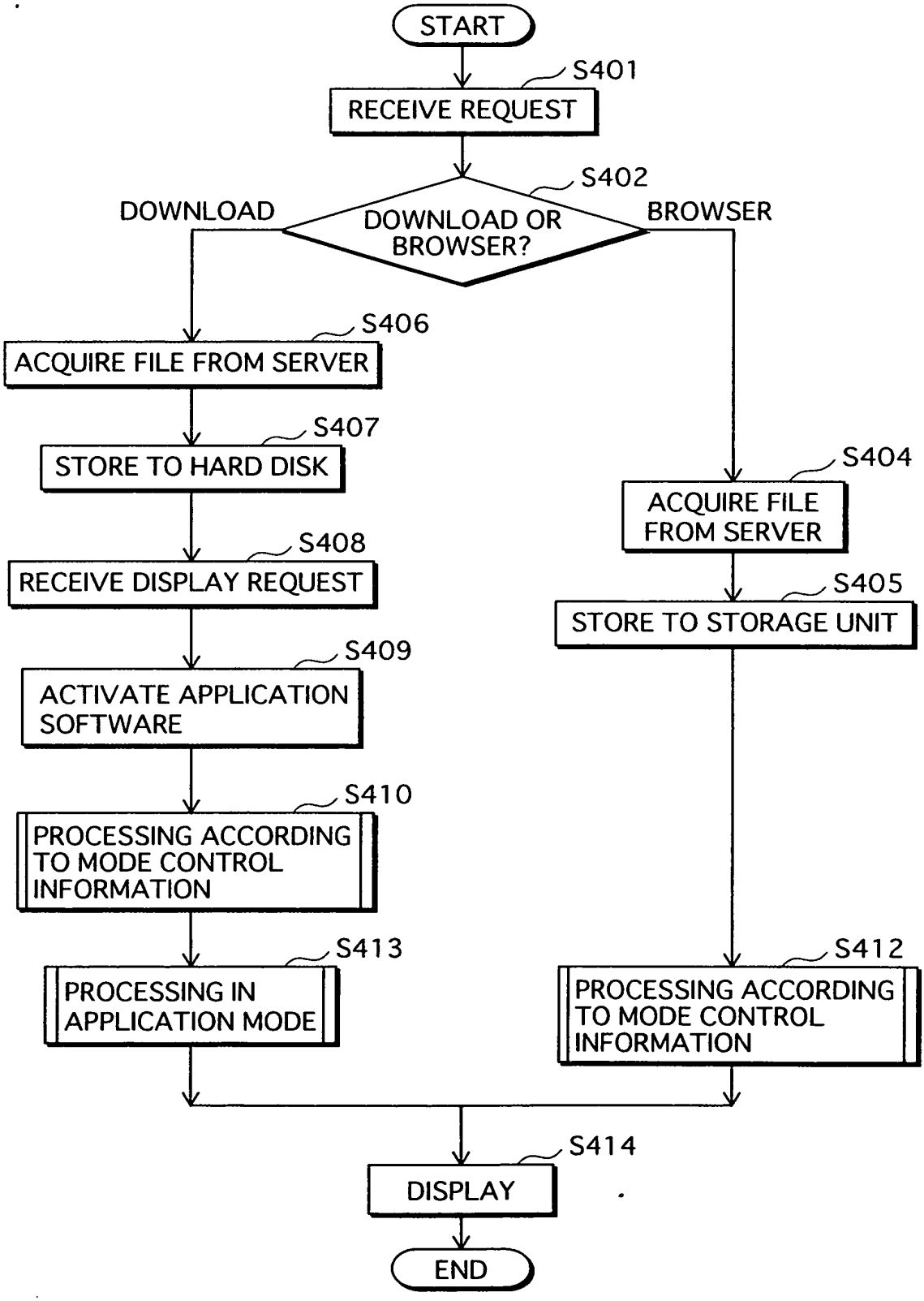

START
S401
RECEIVE REQUEST
S402
DOWNLOAD OR BROWSER?
DOWNLOAD
BROWSER
S406
ACQUIRE FILE FROM SERVER
S407
STORE TO HARD DISK
S408
RECEIVE DISPLAY REQUEST
S409
ACTIVATE APPLICATION SOFTWARE
S410
PROCESSING ACCORDING TO MODE CONTROL INFORMATION
S413
PROCESSING IN APPLICATION MODE
S404
ACQUIRE FILE FROM SERVER
S405
STORE TO STORAGE UNIT
S412
PROCESSING ACCORDING TO MODE CONTROL INFORMATION
S414
DISPLAY
END

FIG.16A

MODE CONTROL INFORMATION 114

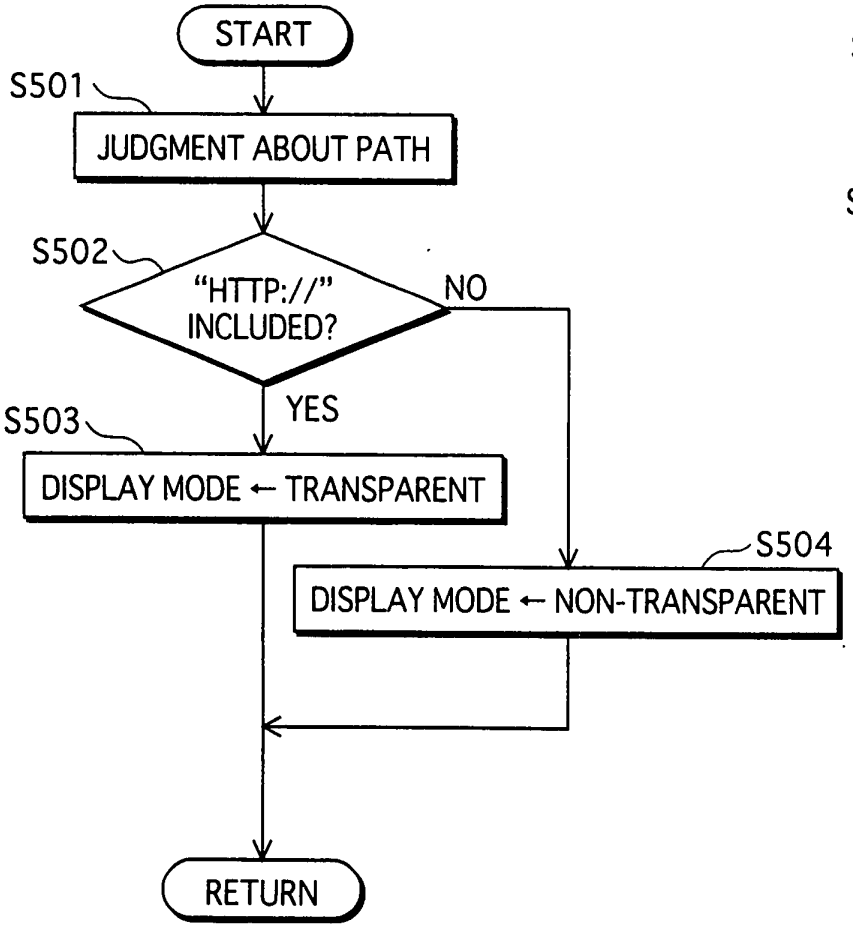


FIG.16B

MODE CONTROL INFORMATION 224

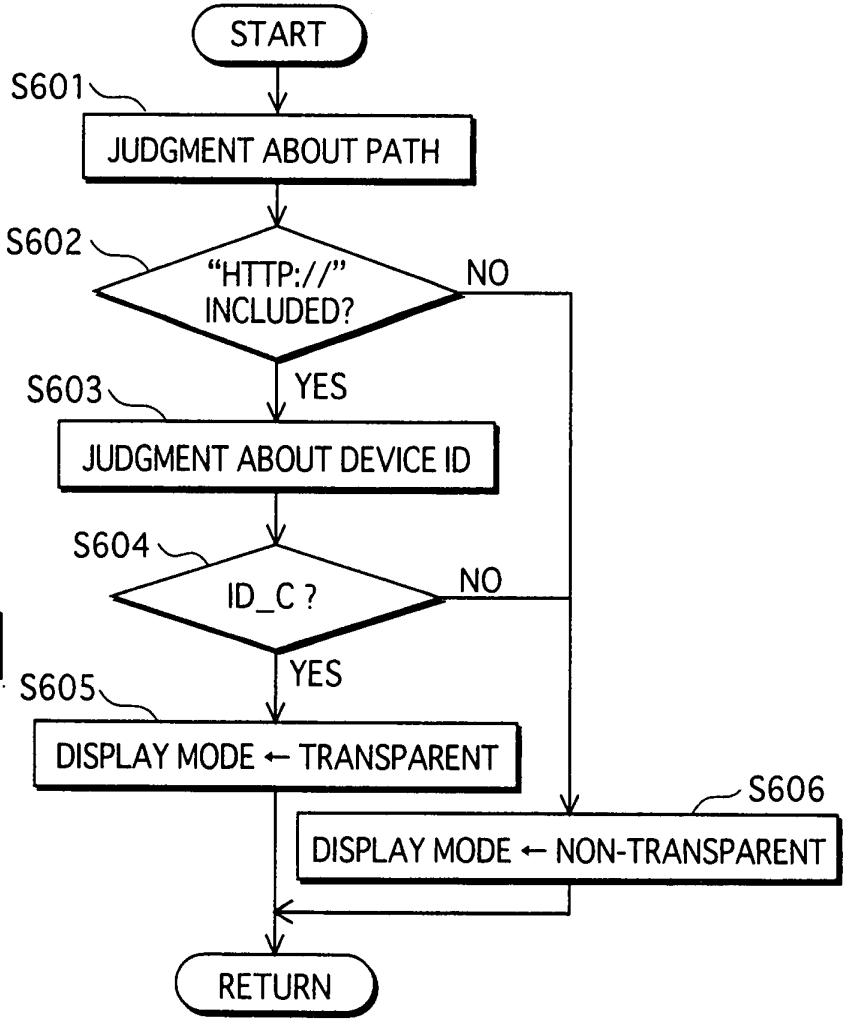


FIG.17

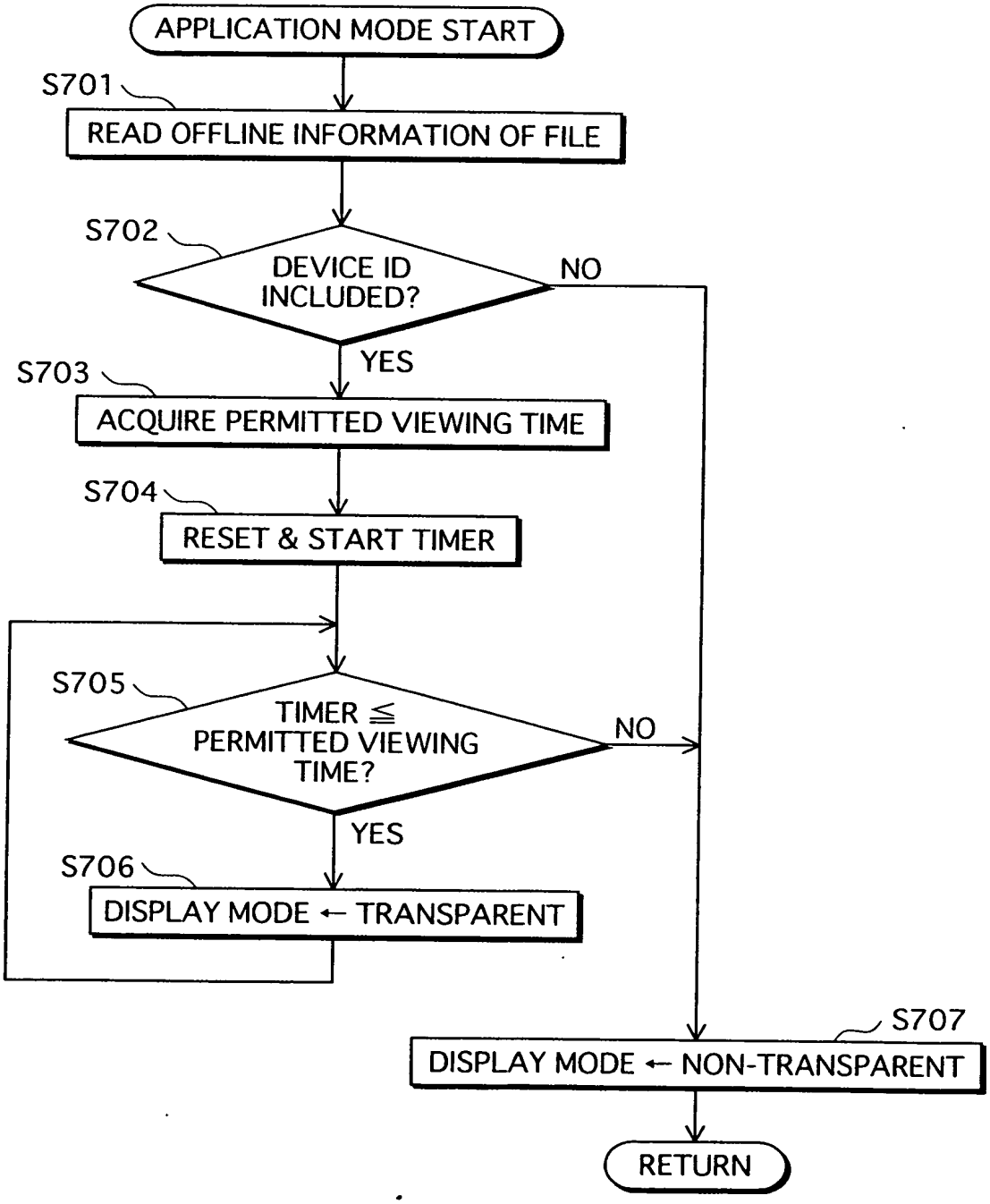

APPLICATION MODE START
S701
READ OFFLINE INFORMATION OF FILE
S702
DEVICE ID INCLUDED?
NO
YES
S703
ACQUIRE PERMITTED VIEWING TIME
S704
RESET & START TIMER
S705
TIMER ≦ PERMITTED VIEWING TIME?
NO
YES
S706
DISPLAY MODE ← TRANSPARENT
S707
DISPLAY MODE ← NON-TRANSPARENT
RETURN

FIG.18A

DISPLAY MODE: NON-TRANSPARENT

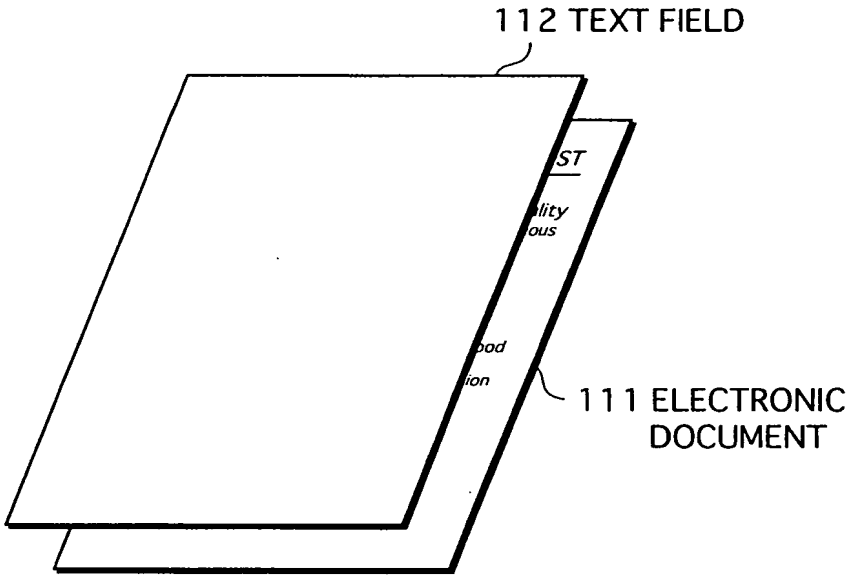
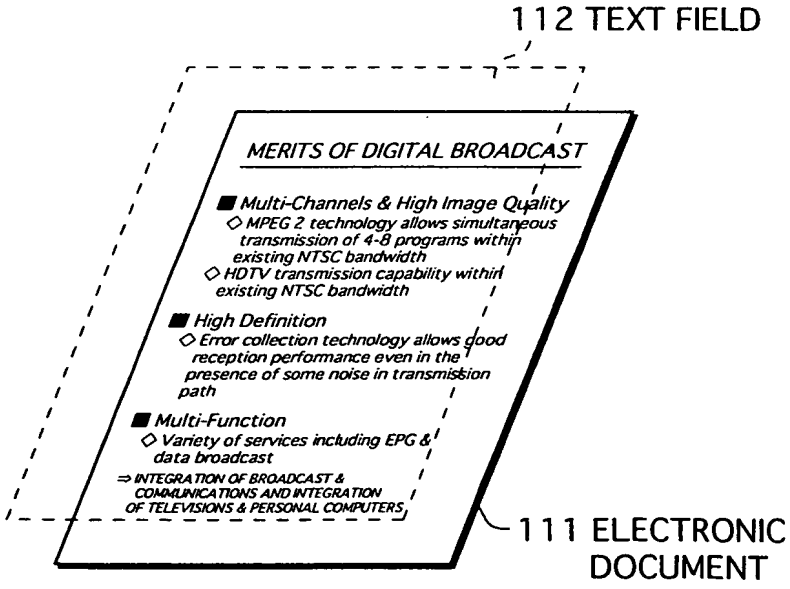


FIG.18B

DISPLAY MODE: TRANSPARENT